

In the Claims

10. (currently amended) A solid-electrolyte secondary battery comprising:

- (a) a positive electrode;
- (b) a negative electrode;
- (c) a solid electrolyte comprising a matrix polymer comprising a fluorocarbon polymer having a weight-average molecular weight of greater than 600,000;
- (d) wherein the matrix polymer further comprises a second fluorocarbon polymer having a weight-average molecular weight of greater than 300,000 and less than 550,000;
- (e) wherein the matrix polymer comprises 30 percent or more by weight of the fluorocarbon polymer having a weight-average molecular weight of greater than 600,000, and wherein the matrix polymer is mixed with a mixture of (i) an electrolyte salt, (ii) a solvent, and (iii) a plasticizer, wherein the concentration of the electrolyte salt is 0.5 to 2.0 mols/liter in the plasticizer;
- (f) wherein the positive electrode has a face which is directed towards the negative electrode and the solid-electrolyte layer is formed on the face of the positive electrode and impregnates into the face a solution in which the solid electrolyte is dissolved; and
- (g) wherein the negative electrode has a face directed toward the positive electrode and the solid-electrolyte layer is formed on the face and impregnates into the face a solution in which the solid electrolyte is dissolved.

11. (previously canceled)

12. (previously canceled)

13. (previously added) The solid-electrolyte secondary batter of claim 10, wherein the fluorocarbon polymer is polyvinylidene fluoride or polyvinylidene fluoride/hexafluoropropylene copolymer.

14. (previously added) The solid-electrolyte secondary battery of Claim 10 wherein at least one of the positive and negative electrodes comprises a binder comprising the matrix polymer of the solid electrolyte.

15. (previously added) The solid-electrolyte secondary battery of Claim 10 wherein the negative electrode comprises a material which is capable of intercalating or deintercalating a lithium ion.

16. (previously added) The solid-electrolyte secondary battery of Claim 15 wherein the material which is capable of intercalating or deintercalating a lithium ion comprises a carbon material.

17. (previously added) The solid-electrolyte secondary battery of Claim 10, wherein the positive electrode comprises a composite oxide of lithium and a transition metal.

18. (previously canceled)

19. (previously canceled)